

SPECIAL 25th-ANNIVERSARY ISSUE

OCTOBER 2004

This Old House



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PHOTO: JEFFREY MAYER/STYLING: JEFFREY MAYER

Carpe diem?

Isn't that Latin for more places to go and more seats to get you there?



PHOTO: JEFFREY MAYER/STYLING: JEFFREY MAYER



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[LETTERS]



PLUMBING PROBLEM

Your series *From the Ground Up* has been interesting and insightful. I would like to point out, however, that in the article "Go With the Flow" (July/August 2004), the diagram showing the plumbing system for the bathtub is in error. The tub overflow is depicted as coming after the trap. This would permit sewer gases to enter the house. In fact, the diagram should have shown both the tub drain and the tub overflow as being before the trap.

JOE PROSSER, FUSION, IL

THE EDITORS REPLY: Thanks for pointing out our drawing error. You aren't alone—many readers write in. The correct configuration for the tub overflow is shown in the illustration above.

ONE MAN'S GARBAGE...

Richard Trethewey always tells good sense, which is why I was surprised that in the July/August 2004 editorial, "Biding Their Time," he recommended garbage disposers over composting.

Anyone with access to a garage, a porch, a deck, or a yard can compost, and I bet there are plenty of high-tech composting pits that would eliminate the "rotting, fermenting...under the sink." The small amount of time I spend tending to the compost is minimal compared with the benefits. No water or electricity is expended to dispose of kitchen and garage

waste, and I get the satisfaction of converting garbage to compost for our garden.

DEBBIE OLIVER, WYOMING

RICHARD TRETHEWEY REPLIES: Thanks for adding your important observation. Composting is terrific if you have the space, inclination, and use for it; that black plastic of good compost is a treat for any gardener. What I meant to convey was that I recommend garbage disposers over stacking garbage in a pit under a sink where flies, roaches, and other vermin abound, and where smells and bacteria become an issue. I was thinking especially of the habits of city dwellers who don't have a garden or a porch for composting.

SEARCH AND RESCUE

My husband and I always turn first to the back page of your magazine for *Save This Old House*. We have been hoping to find a home to restore but don't have a particular location in mind. Could you recommend some other resources where I might look?

CARL BRON, SUMMITVILLE, SC

THE EDITORS REPLY: Readers who turn to *Save This Old House* with more than fantasy in mind might want to check out a Virginia-based Website called www.historicproperties.com. This site lists old homes all over the country in a range of prices and conditions.

Click on "find a home" and then under "conclusion" in the search criteria, select "garage." This will yield many bright properties that can be purchased for a song by ambitious and potentially successful investors.

punch list

editors: a list of items incorrectly done or omitted in the feature or a correction job.

• The Lufkin listing ran above on p. 40. July/August 2004 costs \$12,500 to \$150. Thanks to all the subscribers who wrote us to mention it.

• The carpet prices for the suburban bungalow shown on p. 30 (July/August 2004) is \$4.50 sq. yd. for new carpet and installation.

• In *From the Ground Up*, July/August 2004, p. 85, the last sentence of "Ultra-Queen rules on 'tilt'" should read: "Four gallons of water go down the drain for every gallon of clean water produced."

Address mail to: Letters, This Old House magazine, 160 Avenue of the Americas, New York, NY 10013, or e-mail to TOH_letters@timeinc.com. Please include your old mailing address and change address if published letters will be written for clarity and needs may be used in other ways.

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THE SHAPE OF THINGS TO COME

BY RUSSELL MORASH

Consider this: In 1979, when we started This Old House, most power tools plugged in, Home Depot was a fledgling company, and Norm Abram's electric meter box was so new it hardly had a scratch on it. The amateur renovator was a lone soul who went to the lumberyard with caution and faced the status of the "professionals." Consumer-friendly was a long way off.

Today, home renovation is a \$193 billion industry. TOH and the showstaff have followed it provide an endless stream of inspiration and instruction. If you can't find what you need at the home center, the Internet offers everything from doorknobs to houses. Fixing up a barned beauty is no longer the exclusive domain of the pros.

This month, as we premiere TOH's 25th-anniversary season, it can't help thinking about the changes to come in the next quarter century. Imagine a house made chiefly of man-made materials, from the framing to the trim to the finishes. Once it's built, you won't even have to paint it again, like a car. And while the materials won't necessarily be cheaper, they'll go faster in factory-built modular units, and they'll need so little maintenance that in the long run they'll actually cost less.

In the next 25 years, our biggest priority will be making better use of natural resources. While my ancestors relied trees and saved them into lumber, my great-grandchildren probably won't know what real wood looks like. Instead, we'll use more of the tree by mixing wood fragments and sawdust with resin to make stronger, more stable products that won't check, split, or peel.

The house of the future will be more energy efficient, getting its power from small solar panels and wind generators, pulling heat from the ground, conserving water, and using less-wasteful appliances. Today, when you open the fridge, you're basically opening a cupboard that's been chilled at great expense and letting that valuable cold air escape. Replace it with several smaller compartments and you reduce that wasted energy. Landscaping is destined to change too, with lawns that use fewer chemicals as well as conserve water and reduce upkeep, and gardens that feature easy-care native plants instead of temperamental exotics.

Then there are the computers, which will be found everywhere in smart, more powerful tools, in lighting controls, even in the intelligent tracking the groceries. Given all the changes in building technology we've seen since we began, I expect that to continue. One thing that won't change: As the building industry evolves over the next 25 years, This Old House still will be there to tell you about it. ■



Russ Morash, producer/director and founder of This Old House

"AS WE PREMIERE OUR 25TH-ANNIVERSARY SEASON, I CAN'T HELP THINKING ABOUT THE FUTURE"

COMING IN NOVEMBER

- Smart ideas for master suites
- A place for laundry—and more
- Period light fixtures
- Installing a chandelier
- Decorative painting techniques

ON SALE OCTOBER 16

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Mixing It Up

Classic meets modern in this fish kitchen update

For two avid cooks who love dining, a kitchen where everything from small appliances to a TV to kids' art supplies can be tucked behind beautifully crafted cherry cabinets is a dream come true. When Jeff and Leigh Johnson bought their 1970s brick Colonial, the only drawback they saw was the 1970s-style galley kitchen that came with it. "We figured it was an opportunity to start from scratch," says Jeff, an Atlanta-based architect. The remodeling plan called for gutting the 9 by 20-foot space and building a 30 by 36-foot addition that would not only double the size of the kitchen but open it to a new family room. The plan also made room for a mudroom/pantry where coats, shoes, and their two young daughters' school stuff could be dropped off after entering a side door off the driveway.

The couple wanted to give the kitchen a look that would complement the warm wood worn and throughout without being stuck in a period style. "Our taste tends toward the modern, so we wanted to give the room a contemporary edge," says Jeff. Seamless steel appliances, granite railings, sleek tubular hoodcans, and modern light fixtures accomplish that goal. "We love our old house," says Jeff, "and we think the kitchen is the perfect blend of old and new."

A large stained-oak island with turntable top, designed by the homeowners' friend, is at the center of the new space. Its pale, speckled quartz surface is a counterpoint to the black granite used on the counters. Recessed glass cabinets with over-cast task lighting.

STYLING: KAREN HARRIS

- ☒ Eat healthier
- ☒ Spend more time with family
- ☐ Run marathons



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The Plan

Opening up a galley creates a large, light-filled eat-in kitchen



ABOVE: The narrow 9-ft-by-20-ft eat-in kitchen was transformed in on three sides. **LEFT:** The new 12-ft-by-20-ft space cannot even begin to do justice to these woodies and new glass-paned doors. It also accommodates a breakfasting area and a big island.

WHAT THEY DID

- ENLARGED THE SPACE:** The original 9-ft-by-20-ft kitchen was enlarged to 12 ft by 20, at least, after a major renovation that included a family-room addition. The handy client was relocated upstairs, and a mudroom and large pantry were also added.
- ADDED AN ISLAND AND AN EATING AREA:** Enlarging the kitchen also made room for a casual eating area and a 3-by-8-ft island with stool seating and plenty of storage for a microwave, cookbooks, and pots and pans.
- REWORKED THE LAYOUT:** The new U-shaped work zone allows two cooks to have distinct domains as they shuttle between the island's large work surface and the sink, dishwasher or fridge on one leg of the U, and the microwave pro-style range on the other leg.
- BROUGHT IN MORE LIGHT:** A bank of floor-to-ceiling mahogany-framed windows with two glass-paned doors now floods the space with light and connects the kitchen to the new patio. The old double-hung kitchen window between the sink and stove walls was replaced with four casement windows with fixed lantern lights.

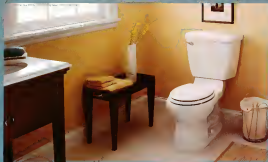
BEFORE



AFTER



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Ask THIS OLD HOUSE

Time is to Ask This Old House on PBS. Tomorrow is the second half of the New This Old House Hour at 8 p.m. ET (check your local listings).



ROGER COOK
LANDSCAPE CONTRACTOR



RICHARD TRETHEWEY
PLUMBING & HEATING EXPERT



TOM SILVA
GENERAL CONTRACTOR



MARK BREEN
PLASTER EXPERT

MOSSY GRASS

My home lawn north and has a few spots dotted with a number of moss, but the lawn is probably being overrun by moss. What is the best way to eliminate this problem?

Austin Dallas, Ansonia, Mo.

ROGER COOK RESPONES: Moss loves shady moist conditions, so exposing it to sun is one of the most effective ways to get rid of it. But short of taking down some trees (or moving the house), the best thing you can do is give up on the grass and introduce some shade-loving groundcovers, such as ivy, goldfishbowl, ajuga, sparganium, or thyme. One visual interest, you could also add some larger shade-loving plants, such as ferns, hostas, adonis, or rhododendrons. Prepare the soil by riddling outside of the tree's drip line after trees (you don't want to damage their roots). Then, till in a one-inch thick layer of compost, cover it with a one-inch layer of sand and till that in also. Now it's ready to plant. Once established, these plants require far less maintenance: water and fertilizer than a lawn.

But if you simply must have a lawn, you could try planting shade-tolerant grasses, such as perennial ryegrass or fescue. Test your soil first—moss is an indicator of soil with too much acidity. To improve the quality of the soil, add lime and till it in, then add compost and till it in. Now add fertilizer and leave your cooperative extension service to send the soil lab results to see how much of each ingredient is needed—and till again to mix the materials together. Finally, rake out the ground to its finish grade, and spread the seed.

You should prune surrounding trees in such a way as possible to let more sunlight in, and follow up with maintenance pruning every three to five years. Also, remember to test the soil annually and add more lime as needed. (When conditions stabilize, a soil test every two or three years will be sufficient.) If you let the soil become acidic again, the moss will reestablish itself.

AIR SLEUTH

During the winter I live next through my air-conditioning ceiling vents, even though I close the vents at the end of the cooling season. I know I'm being dumb because last year I could see some melting off the roof above the ductwork that runs through the attic. Is there anything I can do about this?

Dana Wuerne, Tempe, Ar.

RICHARD TRETHEWEY RESPONES: You're doing the right thing by closing the vents' registers or diffusers, as they're



In shady areas, Roger Cook prefers to plant ground covers rather than struggle to grow grass.

sometimes called. Registers won't exactly airtight, though, if they're rusty and then with magnetic register covers—flexible sheets that can be cut to fit and painted to match the ceiling. Don't displace them too well, though, you'll need to remove them in the summertime, when the air conditioning is needed. If the registers are plastic, there's no ready-made fix, unless you replace them with metal.

But the fact that you're losing so much heat into your attic means the suspect something else is going on as well. If all the other obvious sources for air leakage are plugged—such as the chimney chase or the attic hatch—check to see that all your duct joints are sealed properly. In fact, they're leaking air and costing you money in winter and summer. Mastic is the best sealant because it stays flexible over time. Look for it in heating supply lines or on the attic. Heavy foil-faced duct tape will also do the job, but stay away from duct tape. Despite its name, duct tape uses an adhesive that dries out, making it almost worthless as a sealant, even if the tape looks okay.

After your ducts are sealed, make sure you insulate

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When you're looking for a new house, you want to make sure you're getting the best deal possible. That's why it's so important to know what you're getting into. Here are some things to look for when you're shopping for a house:

- Location:** Is the house in a good location? Is it close to schools, shopping, and transportation?
- Size:** Is the house the right size for you? Do you have enough bedrooms and bathrooms?
- Condition:** Is the house in good condition? Are there any major problems that need to be fixed?
- Price:** Is the house priced fairly? Is it within your budget?
- Neighborhood:** Is the house in a safe neighborhood? Are there any crime problems?
- Future Plans:** Do you have any future plans that might affect your choice of house?

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Ask THE OLD HOUSE

them well with full-faced fiberglass. Usually 1/4- to 1/2 inch is adequate depending on your climate. Your structural building official can tell you how much insulation is recommended for your locale.

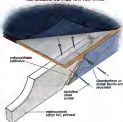
REPLACING RAFTER TAILS

My house has exposed rafters at the eaves, and their ends are deteriorating from the weather. What's the best way to repair them?
P. DAVIS, Whittier, Los Angeles, Calif.

TOM SILVA REPLIES: Minor amounts of rot can be renewed by chipping out the soft or loose material and filling the excavations with epoxy. I like to use a thin epoxy primer finished follow-up with a thicker epoxy filler that's easy to smooth. Let the primer cure, sand it smooth, then repeat to protect the epoxy from the sun.

But if the damage goes more than halfway through the rafter, I wouldn't call that minor. In this case, it's best to cut off the decayed portion and replace it with new wood, preferably a species that stands up to the weather like the heartwood from western red cedar or redwood. Rather than make a square cut across the rafter, angle the cut as much as possible so you have lots of surface area to glue the new wood to. If enough of the cutoff is intact, you can use it as a template to cut the new one.)

REPLACING ROTTED RAFTER TAILS



Connect the new tail to the existing rafter with polyurethane adhesive, which is the best at holding end-grain wood outdoors. Also glue and screw the top edge of the new tail to the underside of the roof sheathing. Stainless steel screws also hold the replacement piece to the rafter, and drill and countersink for the screw holes before spreading the glue. Once you make the "glue" you can choose between filling or gluing the heads after the screws are driven home. Thoroughly scrape away any of the adhesive that is squeezed out, and apply a finish to protect the wood.

PERSISTENT WOODPECKER

I went out one Sunday this spring and replaced the insulation and siding on my house where a flicker had made two softball-size holes, torn out the insulation, and filled the holes with grass to make a nest. After making repairs, I put aluminum foil strips up to help frighten him away. By Sunday afternoon he had torn a new hole a foot from my repairs. What can I do, short of shooting him?

JIM GRAY, TULSA, OKLA.

TOM SILVA REPLIES: A flicker is a type of woodpecker and so is protected by state and federal wildlife laws. Don't shoot it, no matter how frustrated you get, or you'll end up in a heap of trouble.

Toe beat the hell didn't work. 1/2-inch-wide-by-4-foot-long strips are often recommended to discourage woodpeckers. Another approach is to hang a whistle of a hawk nearby or attach lighter balloons with big eyes painted on them. Loud sounds can also be used to frighten the birds away, but that can get to be a problem on its own.

Here's another way to look at it: Your bird's persistence may indicate a severe shortage of suitable flicker housing in your area. They prefer to nest in dead trees (which come to think of it is exactly what your house is made of). But if you provide a desirable alternative, such as a tall nesting box set high on a post, the bird may give up attacking your house.

The problem with nesting boxes is that carpenter usually get to them before the flicker do. Thoroughly locking the back hole with a piece of order siding after the flickers have left for the winter. Any shavings that show up the next season won't be able to get in, but the flickers can easily make a new doorway when they need a nesting spot.



Yellow-shafted flickers will tunnel holes in the sides of houses if no other nesting sites are available.

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the weep holes. Just keep them free of debris. Also, if possible, grade the soil arounding so that gentle rains that direct surface water away from the wall.

If the wall is still too wet, don't despair. You may not need to drill more weep holes and dig more drainage holes. If a diligent spacing them at least apart. Once the soil is dry, you should be able to cover it any way you want.

FIXING A CRACKED DOOR PANEL

One of the panels in our interior wood door has kind a crack across its width for as many years as I can remember. I've tried to fill the gap with caulk, wood filler and shiner products, but the crack keeps coming back. Is there any way to repair it permanently?

WILLIAM WILSON, ZIONVILLE, VA.

NORM ABRAHAM PERLES, Sounds like eclectic case of what happens when wood isn't allowed to move. Ideally a door panel should fit loosely enough between the door's stiles and rails so that it can expand and contract as humidity levels go up and down. But paint buildup on the edges of a panel can grip the surrounding door so tightly that the panel literally tears itself apart when it shrinks. No amount of glue or caulk is going to stop that split from coming up again in dry weather.

To fix the problem for good, you'll have to free up the edges of the panel. If you're lucky, your panels are held in place with molding on one side of the door. All you need to do is pry off the molding and remove the panel so it can be either repaired or replaced.

Unfortunately, most door panels fit into grooves in the stiles and rails, so there's no way to remove them without disassembling the door, which isn't usually worth the effort. So let's start by removing the panel or varnish that's holding it in place. You can work out on the cracked panel, but it's inclined to drop the entire door.

Once the panel edges are free, try to repair the panel's glue. First, scrape out all the caulk and filler and other materials you're put in there. Then screw a couple of small wood clamping blocks onto a rail, then force each edge of the panel against the crack. Brush a thick coat of polyurethane glue into the panel's crack and clamp the two pieces together using the blocks for leverage. When the glue dries,

remove the blocks, fill the screw holes, and scrape away the excess polyurethane. Sand both faces of the panel smooth and prime the repair. Or if your door has a clear finish, refinish both sides of the panel with pen-and-stick wood veneer, whichever finish you use—stain or paint—just be careful not to let any of it seep into the joints.

RAIN IN THE BASEMENT

Under the concrete stoop at our daughter's home there is a little storefront that opens into the basement. During our cold winters, condensation drips from the storefront ceiling. Can this be prevented?

ED URBAN, CHICAGO, ILL.

YOM SILVA REPLIES, Sure, as long as you raise the surface temperature of the under side of the porch or reduce the amount of water vapor in the basement air or both.

When the storefront ceiling is dry—probably this fall—paint it with a cementitious masonry sealer like Dytrol or Thorbase. When it's dry, stick about 2 inches of rigid, foil-faced foam insulation board to the surface using a construction adhesive that's compatible with foam. Some codes require foam to be covered with drywall for fire safety. If that's the case where you live, then you'll need to anchor a girdle of 2x4s strapping to the ceiling after the foam is in place. This will provide a firm base for fastening the drywall.

The insulation will help to isolate the cold stiles from the relatively warmer air in the basement, and that should reduce or eliminate condensation. If it doesn't, you could insulate the storefront walls, but first try poking a dehumidifier down there. All that insulation won't be much help if the moisture level in the basement and the rest of the house is over 50 percent. ■

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WET/DRY VACS

BY JOHN KELSEY PHOTOGRAPHS BY REDELMAR NATURA

The mess that comes with drilling, sawing, sanding, and demolishing can be formidable—consisting of debris that's at once too rough, too large, and too fine for the average household vacuum cleaner. The answer is stored in millions of garages and basement workshops: wet/dry vacuums. The fat hose, strong motor, and big tank of a good vac suck up everything from chunks of plaster and nails to microscopic drywall dust and pools of water. Some even have detachable motors that can be used as leaf blowers.

Wet/dry vacs range in size and power from hand-carried 1-gallon models to heavy 20-gallon monsters. A small, portable or rolling vacuum is fine for the occasional minor job (and makes a great car vacuum as well), but anyone getting into a large renovation project should consider investing in (or renting) a bigger machine. Turn the page for your vac education.



THE ESSENTIALS

POWER SPEED

Manufacturers rate vac power by using a vacuum scale, each of which means something different.

Power draw in amperes Home is better up to 12 amps, more than that can trip a typical household circuit.

Peak horsepower Measures motor must power, not a useful indicator of performance. But some use the only spec available. Look for 1.5 to 2.5 hp on small machines, or less. 2.5 on larger ones.

Rated suction or pulled pressure in inches of water (in.) Measures the motor's suction power with no air flow. Look for 50 inches or more.

Watt flow in cubic feet per minute (cfm) Tells how powerfully the motor drives built-up motion in vacuum. Use these ratings. Find comparisons between filter materials. Anything less than 10 cfm isn't very effective.

Air walls, which compress air flow with suction nozzles. Useful for cleaning no two entirely equivalent machines. 200-watt and so on.

Motor diameter varies. Right model for model. The motor's size is greater and capacity. You will have some choice on hose length. A longer hose is easier to maneuver, but length means suction.

Wet-dry connections When the hose attaches to the tank, look for a screw on or locking mechanism to ensure a tight seal when you tug on the vacuum.

Motor These vacs make a lot of noise. Big doubles and up a typical 40-50 dBA range. So do the motor with mufflers. Devised to reduce noise, they're not perfect. (Always wear ear protection when the vac is running in a power tool.) An additional muffler about \$200-\$300 may be worth the extra cost.

FILTERS

Don't need dust or a vacuum cleaner. Choose a filter that suits your needs. If you have a pet, choose a filter that suits your needs. If you have a pet, choose a filter that suits your needs.

AUTO SHUT-OFF An automatic shut-off that turns off the vac when the tank is full.

WATER PUMP Some models have a pump, which lets you fill up a vacuum tank for clean water.

WHEELS Tigger might seem like a good idea, but it's not. If you're looking for a vacuum, look for a vacuum. If you're looking for a vacuum, look for a vacuum.



HOOKING UP POWER TOOLS

Many power tools come with exhaust ports for attaching a vac hose to directly suck away dust or wood chips. However, unless your power tools and vac are made by the same manufacturer, you'll probably need a universal adapter (see page 100) or a roll of duct tape to connect the hose.

Better still is a vacuum that has an outlet for plugging in the tool. The outlet is wired with a delay switch so the vac starts up when you turn on the tool and stays on for several seconds after you turn it off to clear the hose and tool.

WHEELS

Four wheels are better than two, and at least the front two should swivel. Otherwise, you'll have a hard time getting the vac to turn.

ATTACHMENTS

Most vacs include a long-reach extension tool, and it's worth getting a longer one. The longer the tool, the more you can reach into the vac.

SEALING VALVE

Seals the intake of the vacuum to keep it from sucking in air.

CORD LENGTH

Look for a short power cord, which means you'll have to plug the vac into a power outlet.



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PORTABLE ▷

USES: Cleaning up small jobs such as picking upwall, sanding wood, or blowing out a dryer duct.

CAPACITY: 1 to 4 gallons.

FEATURES: Small, easy-to-tote tanks with handles. Some are cordless, with batteries that run 12 to 18 volts. Cordless handbells without a hose are not very powerful. Those with a hose are 1 to 2 peak hp.

EXPECT TO PAY: \$35 to \$100, plus another \$90 for a battery for some cordless models.

SHOWN: DeWalt cordless or corded wet/dry 3-gallon vac, \$100



WALL-HUNG ▷

USES: Quick, convenient access at a garage or workshop without set-up time or storage issues.

CAPACITY: 6.5 to 5 gallons.

FEATURES: 5 to 4.5 peak hp. All the hoses are hanging over an 18-foot, so 1-year workpiece is bigger you'll need an extension (though this reduces suction).

EXPECT TO PAY: \$70 to \$100.

SHOWN: Shop-Vac hanging Pro, \$70

TOOL-TRIGGERED ▷

USES: Collecting dust and debris made by power tools, small projects and car cleanup.

CAPACITY: 5 to 12 gallons.

FEATURES: Power tool outlet with delay switch fine dust filter for non-wood dust. HEPA filter or floor over 30 mph and extra level low dust discharge. Both important with power tools. Best type of all-around vac, though somewhat pricey.

EXPECT TO PAY: \$200 to \$300.

SHOWN: Porter-Cable 12-gallon wet/dry vac, \$230



INDUSTRIAL ▷

USES: Demolition and construction site cleanup.

CAPACITY: Up to 20 gallons.

FEATURES: Tough but weighty stainless steel tank on a rolling cart, 30-inch inches of water lift.

EXPECT TO PAY: \$200 and up for starter models, at least \$400 for 12 gallons or more, \$25 to \$40 a day to rent.

SHOWN: Craftsman Professional 12-gallon industrial wet/dry vac, \$500

LARGE CAPACITY WITH PUMP ▷

USES: Workshop and job-site cleanup, plumbing or basement cleanouts.

CAPACITY: 10 to 16 gallons.

FEATURES: Vacuum that connects to a pump (some use a garden hose). Power increases with tank size: 3.5 peak hp for 10- to 12-gallon tanks, 5.5 hp for 14 gallons, 6.5 hp for 16 gallons.

EXPECT TO PAY: \$120 to \$140

SHOWN: Craftsman 16-gallon wet/dry vac, \$225



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66 Mike Maloney director, *White*

BY DAVID GREENGLASS

DON'T BE BOUND BY TRADITION

RESEARCH ON THE EFFECTS OF



A radial diagram with 'VERSATILITY' at the center. Lines radiate outwards to various terms: 'MOLD', 'UTILITY', 'VERSATILITY', 'RULES', 'HALF DAN', 'HALF TRUCK', 'SINKED', 'REDERNE', 'AMPLIFIED', and 'GROWTH'.

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[BY DESIGN] PLANNING WINDOWS

THE FRONT DOESN'T HAVE TO DETERMINE ALL THE OTHER SIDES

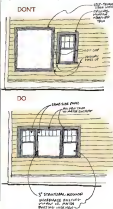
The front of a house should be friendly to visitors and convey a sense of the house's atmosphere. For many people that means a traditional, symmetrical approach, especially in a neighborhood where many homes are a style you would like to expect for a standard by

cold. But the pattern of windows on the front of your house doesn't have to be repeated on all the other sides. If your windows are consistent in the way they are treated—basic type, grille patterns, and trim—they can handle great variation in quantity and style.

The big mistake is to treat windows so differently that something actually "feels" wrong. A place-glass window can directly adjoin a double-hung eight-over-eight Colored window (see illustration, left). If you give that central window its own wall, and keep the trim and window spacing such that it is the star of the house, you can enjoy your big view without compromising the integrity of your house's design.

RULES FOR MIXING WINDOW STYLES

When adding new windows to an existing wall, the trick is to keep the treatment consistent, with compatible trim, grille patterns, and muntin style. A modern plate-glass window looks out of place in a perfectly symmetrical antique facade.



KEEP COMFORT IN MIND

What would have made outside to give your house a sense of style and visual identity isn't always that simple. In some cases, where windows should respond to how outside air and the orientation of the house to the sun and wind. For instance, on a west-facing wall, you don't want a large window that will catch the sun in the middle of the day, which can also be blinding—especially troublesome in a room used for watching television or working on a computer. For windows in close walls, you will need shades or curtains, or to use the all-time classic—4-inch offset the house's interior glass. Similarly, if you know in which direction the prevailing wind blows, you can increase the amount of openable glass in that area, allowing for more passive ventilation and cutting down on air-conditioning bills.

Today's windows are far superior to their older counterparts in terms of blocking unwanted drafts, but you still need to take into account indoor heating and cooling. The water will not condense, large pane of glass will suck heat

in winter and create heat during summer. For maximum comfort in cold climates, it may be necessary to have large areas of glass directly worked by a heat source, such as a convective heat from a radiator or blown heat from a wood-burning stove (just know that this will raise your heating bill). On the flip side, the best way to avoid indoor heat gain is more windows, especially with south-facing windows, to shade the glass with south-facing overhangs so that the high angle of the sun during summer months doesn't directly enter your rooms. Curtains and shades are another defense.

WATCH THE WINDOW TO THE ROOM

Different areas of the house have different requirements for windows. Here are a few guidelines for thinking about windows on a room-by-room basis.

Living Room: The living room is typically one of the largest rooms in the house and therefore can accept the biggest windows, but that makes sense only if there's something to look at. For example, if your living room faces a right-of-way, the view of other people's cars might not be the best use of a large area of windows. Big, south-facing windows can fill all the space looking off the living room with light, without light, but be aware of the potential for overheating in summer. Many living rooms also contain glass doors to decks or patios. Gargled windows, windows and doors can create a sense of openness and bring in the outdoors in a way that makes a house seem larger than it is. Long-term then by placing the top of the openings and using coordinating trim.

Dining Room: Windows in the dining room should be thought about with a great deal of consideration. Most dining rooms are used at night, so do you really need a great window to look through when it's dark outside? An increasing number of homeowners are choosing to put dining spaces in areas with low or no windows, relying on art, a fireplace, or even furniture to create more valuable visual interest when the sun goes down.

Family Room: Given the variety of activities that go on in a family room, window placement can be a challenge. For instance, high light levels and low sun angles interfere with TV viewing—and if you've invested a lot of money in a plasma screen, you certainly want to be able to watch it. So if the view from your family room is terrific, it may be worth it to opt for big windows and relocate the TV and computer. If homework or

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other side would be to face the room, double doors would side you'd like the natural light to come from. For night-headed people, light from the left is best, not from the right.

Kitchen. Double-hung windows over sinks are tough to open and close, so counter is the first choice when you have to reach over a sink or counter to get at them. Windows and cabinets often compete for wall space in kitchens. For the best of both worlds, create a walk-in pantry for storage and have large windows over the counters, where you need to spend more of your time.

Bedrooms. While bedrooms windows admit light and views, door must support function is to allow for sufficient air flow on warm nights. Consider give the most openable area, opening windows can remain open even in light rain, and tall double-hung can have both the upper and lower sash opened. Bedroom windows are also subject to some safety considerations. If you have a second floor bedroom and don't have a lock screen, locking codes require that the window be of a certain size and tall enough to allow you to escape and firefighters to get in.

Bedroom. Privacy is key. Tinted windows, skylights, or even glass block can give you a fair amount of window light without compromising privacy. However, it's a pitfall in most bedrooms have outside windows, rather than relying solely on a fan.

THE HEAD CAN BE HIGHER (AND THE TAIL LOWER) THAN YOU THINK

The vast majority of windows in American houses have their heads on the standard door height of 6 feet 8 inches. With a standard wall height

of 8 feet, that leaves a 14-inch gap between the top of the window and the ceiling—previously used for standard headers and planks, and accommodating of even the biggest window views and corner moldings. But in a room deeper than 12 feet, that head-of-wall pushes the view, and it's silly to keep the top of the window at 6 feet 8 inches with ceiling 8- and 10-foot ceilings. Don't be afraid to set the top of the window clear up to the correct trim. In fact, the corner can even function as the window's head trim, if you plan properly (see illustration, below).

There are a few structural issues to consider when raising window height. Set a window closer than 10 inches from the ceiling and odds are you'll have to cut the header up into the structure of the floor joist or into your above-ceiling "spine" header. The typical construction costs extra, especially in an existing house, but the additional head height can make all the difference in a large room.

Similarly, many windows can be set lower than the standard height of 3 feet above the floor. Traditionally, that height was used to allow the placement of furniture under the sill. But if seating is in front of the window, lowering the sill will increase ventilation (the more openable glass, the greater the no-flow) and allow you to bring a piece of a great view. Note these safety considerations, though. In a child's bedroom, a window lower than 2 feet will need a window guard, and any window with glazing lower than 18 inches off the floor must be safety glass. ■

For more on selecting and installing windows, go to www.thisoldhouse.com or America's Online Keyword: This Old House and type "windows" in the search box.

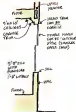
MATCH THE WINDOW HEIGHT TO THE SPACE

There's no rule that says window heads and sills must be set to standard heights. Today's higher ceilings can accommodate taller-than-typical windows. But when planning windows, be sure to factor in how you will use the space. Low sun angles, for instance, can interfere with TV and computer screens.

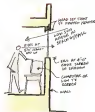
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Today's interconnected homes carry a lot of data behind their walls, most of it coming through wires like these.

Smart Home Networks

Wiring for communications, entertainment, and security

BY PAUL ALEXANDER

Tweny-five years ago, the only wires a house needed were phone and electrical lines. Nowadays, many and more homes depend on another type of wiring—a home network that connects the proliferating electronic devices we use for entertainment, communications, and security. Thanks to systems such as these, the owners of The Old House TV project in Watertown, Massachusetts, for example, can plug a movie into the DVD player and watch it on any TV in the house, or control all the lights from a single keypad. And that's just the basics. Before long, it's possible that every electrical wire in a house will be controlled from one central spot, which in turn can be accessed remotely via phone, PDA, or computer.

To make sure your house is ready for the arrival of that brave

new world, it needs two separate wiring systems: one with low-voltage cables to connect the security devices, and one with "structured wire" to handle the phones, computers, TVs, and audio components. On the following pages, you'll see how a basic home network is set up and learn about some of the things it can do.

Installations of home security systems can best be handled by a reputable specialist. For structured wiring, your electrician can set up the run—if they're careful. "If you strip the wire incorrectly, or even make a hole in the wall, you can easily degrade the signal," says Allen Gallant, the electrical contractor for every *TOH* TV show project. His recommendation: finding a specialist with training equivalent to verify that the finished job conforms to the code it's supposed to. *Continued* ▶

25
YEARS



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Insulation (prior to the series)

BY THE NUMBERS

\$45.1 billion

U.S. consumer spending on home-security systems, including monitoring costs, 1998-2001

20%

Percentage of American homes with electronic security systems

\$500 million

Cost of damage caused every year by power surges in the U.S. and Canada

15.9 million

Number of "wired" homes in U.S. and Canada 2004
(24.6 million in 2003)

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Worth a Look

Great technology from TQW projects



SMART HUB

If there's a super-high-speed cable and clearly to transfer data between electronic devices with FireWire ports (typically computers and digital cameras, among others), TVs, stereos, DVD players, and other devices. But now thanks to a new "smart hub," these devices can communicate directly through a house's Cat5e network giving homeowners the ability to control everything remotely through a TV screen. FireWire also simplifies installation: "You plug in the device to the hub and the hub then will automatically set it and the device that control it, and give you the option of adding it to the network," says Twister Home Entertainment Group's Dave Seaver, who's installing a FireWire-to-Circle system at the TQW TV project house in Celina.



WIREWATCH-CONTROLLED SECURITY SYSTEM

Keyfob remotes that dark garage doors, house lights, and so on—have multiplied to the point where they no longer fit in a pocket or even a purse. That's why the owners of the TQW project house in Celina, Ohio, opted for a wristwatch with a built-in transmitter. With a push on the red button, they can turn their home-security system on and off from up to 200 feet away.

FASTER THAN A SPEEDING ELECTRON

Cable and fiber cables have the capacity to transmit more data than even the most demanding electronic technology can handle. But the day will surely come when these copper-based cables can't keep up with the flood of data pouring through the Internet. If that keeps you up at night, consider the ultimate in network wiring: fiberoptic cable. The drivable cable sends data as light pulses through strands of ultra-pure glass. "The bandwidth is virtually unlimited," says audiovisual specialist Steve Hayes of Custom Electronics, the firm that wired the TV project house in Woodstock, Mass. "It's the most secure cable you can have because there is no electronic transmission that someone can 'tap' or 'listen' in on. It's immune to electronic interference and impossible to short-circuit."

At \$2 a foot, fiberoptic cable is double the price of most structured wiring and requires expensive receivers and transmitters to convert the optical signals into ones that can be read by computers and other electronic devices. Nevertheless, Hayes installs fiberoptics in most of his wiring projects these days, saying it's the best investment going when it comes to networking a home.

Special Advertising Website
Celina's use of 25 ports of home improvement with a TQW Home Video tour, which includes and more. Go to www.tqw.com or America's Cable Network TQW Old House.

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Should You Buy That Fixer-Upper?

A house with problems can be a great opportunity, as long as you know what you're getting into

BY JEFFREY BETHPETER

For people who love old homes—and love to work on them—the notion of buying a fixer-upper can be irresistible. Just think: You can snag a rundown place in a good neighborhood for way below market price, invest some time and money in creating it, and end up with a like-new home that's worth at least twice what you paid for it. Sounds good, right? Often, it is. But buying a fixer-upper can be fraught with peril. So before you take the plunge, make sure you have a realistic idea of what you're getting into: "All people are refiguring up their vision of owning, the costs of renovations, the value of the property and the neighborhood, and how much money they have; they can come out ahead and

ILLUSTRATION: JAMES FOSTER

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